

WHAT IS CLAIMED IS:

1. A process for the production of plastic moldings reinforced with long fibers comprising:
- a) taking off a continuous thread or roving from a coil,
  - 5 b) conveying the continuous thread or roving via a guide to a cutting unit,
  - c) cutting the continuous thread or roving in the cutting unit into finite sections which form long fibers,
  - 10 d) feeding the long fibers via a guide tube to a free-flowing stream of material which is capable of forming a solid plastic,
  - e) combining the long fibers with the stream of material capable of forming a solid plastic,
  - f) introducing the combined stream from step e) into a mold,
  - 15 g) closing the mold,
  - h) allowing the material in the mold to cure, and
  - i) removing the cured molding from the mold
- in which the continuous thread or roving in the guide is maintained under tension pneumatically by a gas flowing in a direction opposite to that in which the thread or roving is being
- 20 conveyed to the cutting unit.
2. The process of Claim 1 in which the continuous thread is conveyed via a guide system comprising (i) a first part comprising a rigid pipeline and (ii) a second part comprising a line system moved with a controlled device for introducing the long fibers into the free-flowing stream
- 25 capable of forming a plastic in a manner such that the continuous thread in (ii) is tensioned only by conveying the thread or roving in the direction of a conveying device arranged on the introducing device.
3. The process of Claim 1 in which the stream of material which forms a solid plastic is a liquid reaction mixture which has a short reaction
- 30 start time.

4. The process of Claim 1 in which the continuous thread or roving is taken off with a take-off speed of at least 2.0 m/s.

5. A device useful for the production of a plastic molding reinforced with long fibers in a mold comprising:

- 5           a)       a bearing seat for coils of continuous threads or rovings,  
          b)       a guide for the continuous thread or rovings which leads the  
                  threads or rovings from the bearing seat to a movement-  
                  controlled introducing device and ends at a cutting unit,  
          c)       the movement-controlled introducing device for introducing a  
10           liquid stream which forms a solid plastic with long fibers,  
          d)       the cutting unit, and  
          e)       a conveying device on the cutting unit

in which the guide for the continuous thread or roving at least partly comprises

- 15            f)        a rigid pipeline system having at least one tensioning air inlet directed against the conveying direction for pneumatic tensioning of the continuous thread or roving.

6. The device of Claim 5 in which the guide on the movement-controlled introducing device comprises a flexible guide hose connected to the rigid pipeline system.

7. The device of Claim 5 in which the guide on the introducing device is separated from the rigid pipeline system.

8. The device of Claim 7 in which the guide on the introducing device has an intake funnel into which the continuous thread or roving runs during the mold filling operation.

9. The device of Claim 6 in which the flexible guide hose is connected to the rigid pipeline system and has a length which compensates for any movement of the introducing device.

10. The device of Claim 5 in which the rigid pipeline system has pipe bends and an air inlet for tensioning the continuous thread or roving is arranged behind at least one of the pipe bends.

11. The device of Claim 5 in which the guide has at least one  
5 conveying air inlet.

12. The device of Claim 8 in which the end of the rigid pipeline system has a telescopic tube which during set-up can be moved as far as the intake funnel.

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